

# Asia-Pacific Conference on Exercise and Sports Science 2007

Theme:

## Asian

# Harmony of Exercise and Sports Sciences

December

## 6-8.2007

Higashi-Hiroshima City, Japan



Program and Abstracts

第3回アジア・太平洋スポーツ科学会議2007

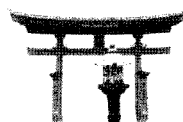
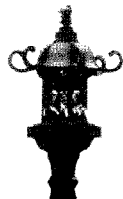
2007年12月6日(木)~8日(土)広島大学

Organized by



Asian Council of Exercise and Sports Science

Hiroshima University



**PB-15****Regulative Effects of Improving Immunity Prescription on the Athletes' Cell Immunological Function**

Quan, Z.W.

Shanghai Institute of Sports Science, China

Objective: Though Improving Immunity Prescription to regulate cell immunological function in different type of athletes. Methods: 32 athletes belong to Shanghai modern pentathlon team and Shanghai canoe team took part in the study. The syndrome differentiation of traditional chinese medicine holds they is of two distinct types, 8 athletes in group of yang deficiency, 10 athletes in group of yin deficiency, treat with Improving immunity Prescription 1 and Improving immunity Prescription 2 individually, and contrast with 14 athletes who don't like traditional chinese medicine. Before and after treatment of 3 months, CD4+, CD8+, CD56+ cells were inspected respectively. Results: After treated with Improving immunity Prescription 1 and Improving immunity Prescription 2 for 3 months, CD4+, CD8+, CD56+ cells were enhanced, were significantly high contrast with control group ( $P < 0.05$ ). Conclusions: Improving immunity Prescription 1 and Improving immunity Prescription 2 could enhance cell immunity in athletes.

**PB-16****Comparison of BMD, Muscle Strength and Some Hormonal and Biochemical Factors of Blood Serum in Athletic Groups (Volleyball and Taekwondo) and Non Athletic Girls**

Bijeh, N.

Ferdowsi University, Iran

Objective: The aim of this research was to investigate bone mineral density (BMD), bone mineral content (BMC), muscular strength and anthropometric characteristic in athletic girls (volleyballs) and taekwondo groups and compared then with athletic girls. Materials and Methods: 15 girls athletic volleyball player with mean age (20/66 3/3), mean height (165 5/52) and mean weight (58/9 6/08) and 13 taekwondo player girls with mean age (19/69 2/78), mean height (161 5/61) and mean weight (56/2 5/01) and 12 non-athletic girls with mean age (21/5 1/9), mean height (160 4/19) and mean weight (52 6/54) as control were selected voluntarily. Results: Results showed that: 1-There was not significant difference in BMD of three lumbar (L2.L3.L4) among athletic and non-athletic groups, although BMD of volleyball players was greater than other groups. 2-Mean BMD of femur (wall and neck) was greater in volleyball players but this was not significantly different. 3-Mean muscular strength of hamstring and quadriceps (in concentric contraction) of both athletic groups was significantly greater than non-athletic group; there was not significant difference between two athletic groups. Conclusion: In general our results showed that athletic groups had greater BMD than non-athletic group, except that taekwondo players had a low BMD at lumbar (L2.L3.L4) because ninety percent of bone growth is accomplished during 10 to 20 ages so teens must be taught that take proper dietary program and have exercise in order to have healthy and strong bones to prevent bone related diseases in adolescent.

**PB-17****Hematological Hemolysis and Muscle Injury After Badminton Exercise**So, W.Y.<sup>1</sup>, Park, K.S.<sup>2</sup>, and Song, W.<sup>1</sup><sup>1</sup>Seoul National University, Korea; <sup>2</sup>Ulsan University, Korea

The purpose of this study was to investigate that the effects of badminton exercise on hematological indicator, morphological changes of erythrocytes, and muscle damages. Forty healthy middle-aged women volunteered for this study, and participated in the acute badminton exercise with control group (N=20), and exercise group (N=20) for 1hr. Blood samples were collected before, immediately after, and post exercise (1hr) in antecubital vein. RBC (Red Blood Cell), Hb (Hemoglobin), Hct (Hematocrit), ESR (Erythrocyte Sedimentation Rate), PBS (Peripheral Blood Smear) Morphology, ammonia, CPK (Creatine Phosphokinase), LDH (Lactic Dehydrogenase) were significantly increased in exercise group compared to control group immediately after 1hr badminton exercise. During recovery 1hr post exercise, RBC, Hct, ESR, PBS morphology, CPK, LDH were still higher in exercise group than control group. Since increased ESR, PBS morphology, ammonia, CPK, LDH has been known as indicators of hematological hemolysis, these results demonstrates that hemolysis was occurred by 1hr badminton exercise (77% of HRR: Heart Rate Reserve) and was not recovered even after post 1hr exercise.